

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Amendments to Claims

Claims 1 and 5 have been amended to respectively recite that the entire portion of the metal film is in direct contact with the base (thereby precluding interpretation of the claim as covering a cantilever arrangement such as the one shown in the Wada patent, discussed below), and that the fixture portion or the linear member are separated the based by no more than the thickness of the at least one metal film.

In addition, claims 4, 11, 16, and 30-33 have been canceled, and new claim 34 has been added to further specify the manner in which the entire flat part of the metal film is welded to the additional member and contacts the base.

2. Rejection of Claims 1-6, 8-17, 25, and 28-33 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada) and 4,982,134 (Aono)

This rejection is respectfully traversed on the grounds that the Wada patent does not disclose or suggest:

- an additional member welded to “a portion” of a metal film, wherein the entire portion of the metal film (to which the additional member is welded) is in direct contact with the base, as recited in independent claim 1,
- an additional member that connects the fixture portion of a linear member to a metal film such that the distance between the fixture portion or additional member and the base is “not greater” than the thickness of the metal film, as is now recited in independent claim 5, or
- an additional member welded to “a flat part” of a metal film, wherein the entire flat part of the metal film (to which the additional member is welded) is in direct contact with the base, as recited in independent claim 34.

Instead of being welded to a “portion” or flat part of a metal film, the entire portion or flat part being in direct contact with the base, as recited in claims 1 and 34, the so-called “additional member” 12a of Wada is cantilevered to the base a “the leading end” of L-shaped connection portion 13a. The entire portion of L-shaped connection portion 13a of Wada is therefore clearly not “in direct contact with the base,” as claimed.

Furthermore, in contrast to the arrangement recited in claim 5, Wada’s additional member 12a connects the fixture portion of the linear member 2a to a leading end of the L-shape connection portion 13a such that the distance between the fixture portion of the linear member 2a and the base 4b, and the distance between the additional member 12a and the base 4b, are **greater** than the thickness of the connection portion 13a.

It is respectfully submitted that these structural differences between the claimed invention and the electron tube of Wada are not merely a matter of design choice. Since the Wada arrangement resembles the prior art discussed on pages 6-7 of the present specification, it suffers from the same disadvantages, namely that (i) the support member (the base portion and the L-shape connection portion) has a complicated shape making assembly of the electron tube and especially the filament mounting process more difficult, and (ii) the shape necessitates a relative large size in order to achieve sufficient strength, setting a limit on the miniaturization of the electron tube.

These deficiencies of the Wada patent are not made-up for by the Aono patent, which discloses a structure in which the linear member 11 is secured to a spring 18 extending from the frame of a back electrode, and therefore also does not suggest the claimed structural relationship between a linear member, additional member, and metal film.

Accordingly, withdrawal of the rejection of claims 1-6, 8-17, 25, and 28-33 under 35 USC §103(a) is respectfully requested.

3. Rejection of Claim 7 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada), 4,982,134 (Aono), and 5,834,892 (Kikuchi)

This rejection is respectfully traversed on the grounds that the Kikuchi patent, like the Wada and Aono patents, fails to disclose or suggest, whether considered individually or in combination with any of the other references of record, the claimed linear member having a fixture portion, additional member, and base with the structure relationships recited in claim 5, from which claim 7 depends.

Instead, the Kikuchi patent discloses a fluorescent display tube in which the cathodes are fixed by “anchors” of different heights. There is no suggestion that the anchors include a metal film formed on a base in the manner claimed, or of welding an additional member to the metal film in order to secure the cathodes, and therefore the Kikuchi patent could not possibly have suggested the claimed structural relationships between the base, additional member, and metal film. Accordingly, withdrawal of the rejection of claim 7 under 35 USC §103(a) is respectfully requested.

4. Rejection of Claims 26 and 27 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,811,920 (Wada), 4,982,134 (Aono), and 5,621,284 (Shichao)

This rejection is respectfully traversed on the grounds that the Shichao patent, like the Wada and Aono patents, fails to disclose or suggest, whether considered individually or in combination with any of the other references of record, the claimed metal film formed on a base, a welded portion being entirely in contact with the base as recited in claim 1, from which claims 26 and 27 depend.

Instead, the Shichao patent disclose cathode filaments secured to a circuit board by springs 204 and leads 205, and “supported by side walls 211 and spacers.” Again, there is no suggestion of the claimed metal film, base, or additional member, and therefore withdrawal of the rejection of claims 26 and 27 under 35 USC §103(a) is respectfully requested.

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Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

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